

Claims

1. A process of oxidizing starch wherein a root or tuber starch comprising at least 95 wt.% based on dry substance of the starch of amylopectin, or a derivative thereof, is treated with hydrogen peroxide in the presence of a catalyst, which catalyst comprises divalent copper ions.
2. A process according to claim 1, wherein the catalyst is a copper(II)chloride, copper(II)sulfate, copper(II)phosphate, copper(II)nitrate salt, copper(II)acetate salt, copper(II)bromide salt or a combination thereof.
3. A process according to any one of the preceding claims, wherein the catalyst is present in an amount ranging from about 5 ppb to about 5000 ppb, preferably from 100 to about 1000 ppb, on dry substance of starch.
4. A process according to any one of the preceding claims, wherein the action of the divalent copper ions is enhanced by one or more of calcium, vanadium, manganese, iron or tungsten ions.
5. A process according to any of the preceding claims, wherein the starch is potato starch or tapioca starch.
6. A process according to any one of the preceding claims, wherein the hydrogen peroxide is used in an amount ranging from 0.01 to 5.0 wt.%, preferably from 0.05 to 2.5 wt.% on dry substance of starch.
7. A process according to any one of the preceding claims, wherein the derivative of the starch is a cationic, anionic or amphoteric starch.
8. An oxidized starch obtainable by a process according to any one of the preceding claims.
9. Use of an oxidized starch according to claim 8 as a binder in paper coatings or surface sizings, as an adhesive, in warp yarn sizing, as a coating of glass fibers, as a blanket adhesive, and in abrasive paper or in food products.

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